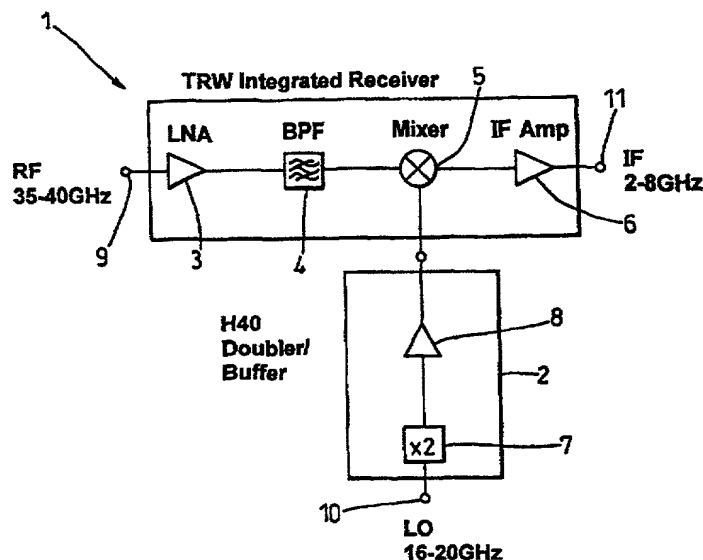




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(54) Title: ELECTROMAGNETIC WAVE RECEIVER FRONT END



## (57) Abstract

A receiver front end is provided capable of receiving electromagnetic wave signals having frequencies in the range of substantially 35GHz to substantially 40GHz, and having a gain of substantially 24dB or above and a noise figure of substantially 4dB or below, and comprising one or more multifunction monolithic microwave integrated circuits (MMICs). The receiver front end preferably has a noise figure of substantially 4dB or below over an output signal frequency range of substantially 1 to 10GHz, and a size in the region of 30mm<sup>2</sup> or less. The receiver front end may comprise a receiver MMIC, and a doubler/buffer amplifier MMIC. The receiver MMIC may comprise a low noise amplifier (3), a mixer (5), a filter (4) and an intermediate frequency amplifier (6).